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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,934	09/23/1999	MIYUKI KAWATAKA	FUJY-16.538	5328

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EXAMINER	
ABELSON, RONALD B	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/401,934	KAWATAKA, MIYUKI	
	Examiner	Art Unit	
	Ronald Abelson	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 September 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/30/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohyoshi (US 6,118,759).

Regarding claim 1, Ohyoshi teaches a method and apparatus for interfacing a frame relay network and an ATM network (fig. 25).

The system comprises a congesting information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network (fig. 25 EFCI, col. 1 lines 61-67, 48-50). Note, the EFCI bit extracted in fig. 25 was set in the ATM network (col. 1 lines 48-50).

The system comprises a mode setting means for setting a mode (fig. 25, FECN in the core header, col. 1 lines 61-67) for

deciding congestion information of an output side (fig. 25 frame relay network 2, col. 1 lines 61-67) in accordance with a combination of said extracted congestion information (fig. 25 EFCI) and a setting condition (fig. 25 Frame Relay Network 1 FECN bit), and said mode setting means selects any one of a plurality of modes (fig. 25, FECN in the core header, col. 1 lines 61-67). Note, when either the EFCI bit is "1" or the FECN in Frame Relay Network 1 is "1", the FECN bit in Frame Relay Network 2 is set to "1" (col. 1 lines 61-67). Regarding a plurality of modes, FECN may be set to "0" (no congestion) or "1" (congestion).

The system comprises a congestion information writing means for writing the congestion information into data of the other network (fig. 25 in Frame Relay Network 2) of said frame relay network and said ATM network in accordance with a mode set by said mode setting means (fig. 25 FECN bit of Frame Relay Network 2, FECN in the core header is set to "1", col. 1 lines 61-67).

Regarding claim 4, Ohyoshi teaches a method and apparatus for interfacing a frame relay network and an ATM network (fig. 25).

The system comprises a congesting information extracting means for extracting congestion information from data of one

network of said frame relay network and said ATM network (fig. 25 EFCI, col. 1 lines 61-67, 48-50). Note, the EFCI bit extracted in fig. 25 was set in the ATM network (col. 1 lines 48-50).

The system comprises a mode setting means for setting a mode (fig. 25, FECN in the core header, col. 1 lines 61-67) for deciding congestion information of an output side (fig. 25 frame relay network 2, col. 1 lines 61-67) in accordance with a combination of said extracted congestion information (fig. 25 EFCI) and a setting condition (fig. 25 Frame Relay Network 1 FECN bit). Note, when either the EFCI bit is "1" or the FECN in Frame Relay Network 1 is "1", the FECN bit in Frame Relay Network 2 is set to "1" (col. 1 lines 61-67).

The system comprises a congestion information writing means for writing the congestion information into data of the other network (fig. 25 in Frame Relay Network 2) of said frame relay network and said ATM network in accordance with a mode set by said mode setting means (fig. 25 FECN bit of Frame Relay Network 2, FECN in the core header is set to "1", col. 1 lines 61-67).

The system comprises wherein while setting the congestion information along a backward direction defined from the ATM network to the frame relay network (BECN, col. 1 lines 43-50). Note, the examiner defines the backward direction from frame

relay network 2 to the ATM to frame relay network 1 in Ohyoshi (fig. 1).

Regarding claim 4, the setting means selects any one of a first mode in which the congestion information transmitted from the backward direction is directly set to congestion information of frame relay data (BECN, frame relay networks, col. 1 lines 43-50) and a second mode in which congestion information of frame relay data is always set to "no congestion". Note, the claim language only requires the system to be able to select one of the modes.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2 and 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyoshi in view of Thomas (US 5,960,215).

Regarding claims 2 and 3, Ohyoshi teaches a method and apparatus for interfacing a frame relay network and an ATM network (fig. 25).

The system comprises a congesting information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network (fig. 25 EFCI, col. 1 lines 61-67, 48-50). Note, the EFCI bit extracted in fig. 25 was set in the ATM network (col. 1 lines 48-50).

The system comprises a mode setting means for setting a mode (fig. 25, FECN in the core header, col. 1 lines 61-67) for deciding congestion information of an output side (fig. 25 frame relay network 2, col. 1 lines 61-67) in accordance with a combination of said extracted congestion information (fig. 25 EFCI) and a setting condition (fig. 25 Frame Relay Network 1 FECN bit). Note, when either the EFCI bit is "1" or the FECN in Frame Relay Network 1 is "1", the FECN bit in Frame Relay Network 2 is set to "1" (col. 1 lines 61-67).

The system comprises a congestion information writing means for writing the congestion information into data of the other network (fig. 25 in Frame Relay Network 2) of said frame relay

network and said ATM network in accordance with a mode set by said mode setting means (fig. 25 FECN bit of Frame Relay Network 2, FECN in the core header is set to "1", col. 1 lines 61-67).

The system comprises setting the congestion information along a forward direction defined from the ATM network the frame relay network (fig. 25: see ATM network to frame relay network 2). Furthermore, congestion information is stored in the frame relay data (fig. 25: see FECN of frame relay network 2).

Although Ohyoshi teaches congestion information setting based upon the ATM network (col. 1 line 64), Ohyoshi is silent on the mode setting means in which the mode setting means selects any one of a first mode in which "congestion occurs" is set to at least congestion information of an ATM cell corresponding to a segment frame, a second mode in which "congestion occurs" is set to congestion information of all of ATM cells corresponding to a segment frame, and a third mode in which "congestion occurs" is set only to congestion information of a final ATM cell corresponding to a segment frame, as specified in claim 2; a first mode in which "congestion occurs" is set to at least congestion information of frame relay data when the received ATM cell is a final ATM cell corresponding to a segment frame and a second mode in which "congestion occurs"

is set to congestion information of frame relay data when the received ATM cell is any of the ATM cells corresponding to a segment frame, as specified in claim 3.

Thomas teaches a first mode in which "congestion occurs" is set to at least congestion information of frame relay data (fig. 25: FECN of ATM network to frame relay network 2) when the received ATM cell is a final ATM cell corresponding to a segment frame (EFCI bit in the last cell received in the packet, col. 57 lines 26-28); and a second mode in which "congestion occurs" is set to congestion information of frame relay data when the received ATM cell is any of the ATM cells corresponding to a segment frame (logical OR of all the EFCI bits, col. 57 lines 26-28). Note, the claim language only requires the system to be able to select one of the modes.

Therefore it would have been obvious to one of ordinary skill in the art, having both Ohyoshi and Thomas before him/her and with the teachings [a] as shown by Ohyoshi, a method and apparatus for interfacing a frame relay network and an ATM network, and [b] as shown by Thomas, a method and apparatus for interfacing a frame relay network and an ATM network, to be motivated to modify the system of Ohyoshi by setting the value

of the EFCI bit according to the teachings of Thomas. This can be accomplished by using the OR_CI field of Thomas (fig. 37 field 2122, col. 57 lines 29-31). This would improve the system by allowing the system to process end of packet receiver slots in a more optimal manner (Thomas: significance for end-of-packet rx slots, col. 57 lines 29-31).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohyoshi in view of Soumiya (US 5,936,958).

Regarding claim 5, Ohyoshi teaches a method and apparatus for interfacing a frame relay network and an ATM network (fig. 25).

The system comprises a congesting information extracting means for extracting congestion information from data of one network of said frame relay network and said ATM network (fig. 25 EFCI, col. 1 lines 61-67, 48-50). Note, the EFCI bit extracted in fig. 25 was set in the ATM network (col. 1 lines 48-50).

The system comprises a mode setting means for setting a mode (fig. 25, FECN in the core header, col. 1 lines 61-67) for deciding congestion information of an output side (fig. 25 frame relay network 2, col. 1 lines 61-67) in accordance with a combination of said extracted congestion information (fig. 25

EFCI) and a setting condition (fig. 25 Frame Relay Network 1 FECN bit). Note, when either the EFCI bit is "1" or the FECN in Frame Relay Network 1 is "1", the FECN bit in Frame Relay Network 2 is set to "1" (col. 1 lines 61-67).

The system comprises a congestion information writing means for writing the congestion information into data of the other network (fig. 25 in Frame Relay Network 2) of said frame relay network and said ATM network in accordance with a mode set by said mode setting means (fig. 25 FECN bit of Frame Relay Network 2, FECN in the core header is set to "1", col. 1 lines 61-67).

The system comprises wherein while setting the congestion information along a backward direction defined from the ATM network to the frame relay network (BECN, col. 1 lines 43-50). Note, the examiner defines the backward direction from frame relay network 2 to the ATM to frame relay network 1 in Ohyoshi (fig. 1).

The system comprises a mode setting means for selecting any one of plural modes prepared by combining the state of congestion of the ATM network with congestion information of the frame relay network (fig. 25 frame relay network 2, col. 1 lines 61-67). Note, when either the EFCI bit is "1" or the FECN in Frame Relay Network 1 is "1", the FECN bit in Frame Relay

Network 2 is set to "1" (col. 1 lines 61-67). Note, the examiner corresponds plural modes to be congestion exists or congestion does not exist.

Ohyoshi is silent on a congestion transition means for transferring a congestion state in response to a congestion information value of an ATM cell received along the backward direction.

Soumiya teaches a congestion transition means for transferring a congestion state in response to a congestion information value of an ATM cell received along the backward direction (BECN, ATM network, col. 27 lines 14-17).

Therefore it would have been obvious to one of ordinary skill in the art, having both Ohyoshi and Soumiya before him/her and with the teachings [a] as shown by Ohyoshi, a method and apparatus for interfacing a frame relay network and an ATM network, and [b] as shown by Soumiya, a congestion transition means for transferring a congestion state in response to a congestion information value of an ATM cell received along the backward direction, to be motivated to modify the system of Ohyoshi by transferring in a backward direction the congestion

notification bit based upon the combined congestion states of the frame relay and ATM networks. This modification can be performed in software. This would improve the system by allowing the source frame relay network to know if congestion occurs in either the receiving frame relay network or the ATM network.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Ohyoshi and Soumiya as applied to claim 5 above, and further in view of Hluchyj (US 5,497,375).

The combination is silent on the congestion transition means is comprised of a timer, and forcibly updates a congestion state when new congestion information is not reached for a predetermined time.

Hluchyj teaches the congestion transition means is comprised of a timer, and forcibly updates a congestion state when new congestion information is not reached for a predetermined time (fig. 11 box 1104, 1108, col. 6 lines 65-67).

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of Ohyoshi and Soumiya and Hluchyj before him/her and with the teachings [a] as shown by the combination of Ohyoshi and Soumiya, a method and

apparatus for interfacing a frame relay network and an ATM network, and [b] as shown by Hluchyj, the congestion transition means is comprised of a timer, and forcibly updates a congestion state when new congestion information is not reached for a predetermined time, to be motivated to modify the system of the combination of Ohyoshi and Soumiya by setting the congestion state to congested when the a congestion indication arrives from the ATM or frame relay network indicating congestion or no congestion indicator arrives for from either network for a predetermined time. Adding a timer to the congestion indication process can perform this modification. This would improve the system since congestion in the network can be assumed if congestion indication bits do not arrive in an adequate time period.

Response to Arguments

7. Applicant's arguments filed 10/18/2004 have been fully considered but they are not persuasive.

The applicant alleges that the informing of congestion as described in Ohyoshi is different from setting a mode as described by the applicant (applicant: pg. 9 lines 16-17, pg. 10 line 1, 9-11, pg. 11 lines 5-8). However, the applicant

describes setting a mode by selecting a mode as "congestion occurs" (specification: pg. 9 -14). As stated previously, the mode setting options in Ohyoshi are congestion occurs (FECN=1) or congestion does not occur (FECN=0).

The applicant alleges that Ohyoshi does not teach setting a mode with regard to a combination of the extracted congestion information and a setting condition (applicant: pg. 10 lines 9 - 14). However, Ohyoshi teaches in fig. 25 setting a mode / FECN bit in frame relay network 2 is formed based upon extracted congestion information / EFCI bit of the ATM network and a setting condition / FECN bit in frame relay network 1.

The applicant further alleges that Ohyoshi does not teach writing the congestion information into data of the other network of said frame relay network and said ATM network in accordance with a mode set by said mode setting means (pg. 10 lines 15-17). As stated previously Ohyoshi teaches writing the congestion information (fig. 25 FECN bit of Frame Relay Network 2, FECN in the core header is set to "1", col. 1 lines 61-67).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RA
Ronald Abelson
Examiner
Art Unit 2666

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2/8/05

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 2/11/05